| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL | SHEET | TOTAL |
|------------------------|----------|-----------|--------|-------|--------|
| D131, NO. | <u> </u> | | TEAR | NO. | SHEETS |
| 8 | OKLA. | 24750(04) | | 36 | 127 |
| DESCRIPTION REVISIONS | | | | DATE | |

State of Oklahoma

Department of Transportation

Guy Engineering Services, Inc.

Dustin M. McNally, PLS 1636

10759 East Admiral Place Tulsa, Oklahoma 74116

Phone (918) 437-0282 Fax (918) 437-0455 C.A. 1427, Expires 6/2014

Mr. Larry Reser, Chief of Surveys

From: Dustin M. McNally, Professional Land Surveyor

Subject: SWO 4721(1), J/P No. 24750(04), U.S. 169, Bridge over Hickory Creek, 13.5 miles north of U.S. 60 at Nowata.

NOWATA COUNTY

Historical Letter and Written Report

1. General:

Survey began: February 20, 2013

Survey completed: June 04, 2013

Personnel on this survey:

Dustin M. McNally, PLS Chris A. Cauthon, PLS

Jason Mock, Survey Technician

Jason Lilly, Survey Technician

Ryan Harrison, LSIT

Tim DeArmon, Survey Technician

Stevfen Miller, Survey Technician

Brandon Travers, Survey Technician

Amanda Reid, Survey Technician

Vincent Miller, Survey Technician

Benjamin Marts, Engineer Intern

Previous Surveys and Plans relevant to this project:

SWO 2137(1) Survey

FAP No. F-193 (10) Plans

2. Assignment:

Assignment of this survey originated by ODOT Project Management Division Task Order No. EC-1412D dated August 13, 2011 from Mr. Larry Reser, PLS, Chief of Surveys. This survey was assigned to me under Engineering Contract No. EC-1365, J/P No. 24750(04).

The Assignment of the survey included:

SWO 4721(1) Survey Special Provisions

Attachment No. 1- Location Map

Attachment No. 2-Land Surveyor's Certification Form

Attachment No. 3-SD Form #7

Attachment No. 4-Specifications for surveys for Primary and Secondary Highways dated January 2011.

Attachment No. 5-Suggested sequence of survey

Attachment No. 6-Project Completion Percentages

Attachment No. 7-Standard CADD files, issued March 5, 2004

3. Purpose:

The purpose of this survey is to furnish sufficient data to develop plans to construct a new bridge over Hickory Creek north of Nowata.

4. Survey Limits:

This survey begins at P.R.C. Station 676+30.21 and extends north to P.C. Station 761+34.68 as established under SWO2137(1) survey and shown on FAP No. F-193 (10) plans.

5. Alignment:

A001 - Centerline of present U.S. 169

The Centerline of Survey is 32.00 feet east and parallel to the centerline of survey as established under SWO 2137(1) survey and shown on FAP No. F-193 (10) plans.

6. Stationing:

Stationing for this survey is taken from SWO 2137(1) survey.

7. Horizontal Control:

Horizontal control for this survey is N.G.S. Oklahoma State Plane Coordinate System NAD 83 Lambert Projection North Zone (Zone 3501). The distances, coordinates, and elevations shown in this survey are U.S. Survey Feet. All angles and bearings are shown are in degrees, minutes, and seconds.

8. Vertical Control:

A. Datum:

Level datum for this survey is N.G.S. N.A.V.D. 88.

B. Source:

Level datum for this survey was taken from G.P.S. network solution using CORS Stations OKMU, OKTU, and MOCA and HARN stations E17. The resulting elevations were applied to control points on each end of the

RTK ties were performed to insure accuracy.

CHECKED VKM APPROVED DMM

Tie #1 - RV 2 a NGS First Class II order benchmark P.I.D. GG0455. The resulting tie was 0.03' lower than published elevation.

Tie #2 - E 17 a NGS First Class II order benchmark P.I.D. GG0465. The resulting tie was 0.03' higher than published elevation.

C Method:

A double line of differential levels was run through the site using Sokkia model 300 and B21 automatic levels.

OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION PLS DMM DRAWN ARR

SURVEY DATA SHEET (2)

CREW GES, INC. SWO 4721(1) PROJECT NO. 24750(04) SHEET NO. 36